

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A method for adjusting engine operation of a vehicle having a humidity sensor, the method comprising:

determining a parameter indicative of ambient humidity outside of the vehicle based on said sensor;

determining varying a desired cylinder valve condition based at least as said parameter indicative of ambient humidity varies; and

adjusting a control signal to adjust said cylinder valve based on said desired cylinder valve condition; and

determining degradation of said sensor based on a signal.

2. (original) The method of claim 1 wherein said desired cylinder valve condition is a desired cylinder valve lift.

3. (original) The method of claim 1 wherein said desired cylinder valve condition is a desired cylinder intake valve lift.

4. (original) The method of claim 1 wherein said desired cylinder valve condition is a desired cylinder exhaust valve lift.

5. (original) The method of claim 1 wherein said desired cylinder valve condition is a desired cylinder valve timing.
6. (original) The method of claim 1 wherein said desired cylinder valve condition is a desired cylinder intake valve timing.
7. (original) The method of claim 1 wherein said desired cylinder valve condition is a desired cylinder exhaust valve timing.
8. (original) The method of claim 1 wherein said desired cylinder valve condition is a desired cylinder cam timing.
9. (original) The method of claim 1 wherein said desired cylinder valve condition is a desired cylinder intake valve cam timing.
10. (original) The method of claim 1 wherein said desired cylinder valve condition is a desired cylinder exhaust valve cam timing.
11. (original) The method of claim 1 wherein said desired cylinder valve condition is a desired cylinder intake and exhaust valve cam timing.

12. (currently amended) A method for adjusting engine operation of a vehicle having a humidity sensor, the engine having a cylinder with a valve, the method comprising:

determining a parameter indicative of ambient humidity outside of the vehicle based on said sensor;

determining a desired cylinder cam timing based at least on said parameter and an engine operating condition; and

adjusting a control signal to adjust said cylinder valve based on said desired cylinder cam timing; and

determining degradation of said humidity sensor based at least on a measured signal.

13. (original) The method recited in claim 12 wherein said parameter is absolute humidity.

14. (original) The method recited in claim 12 wherein said parameter is relative humidity.

15. (cancelled)

16. (currently amended) The method recited in claim ~~15~~ 12 further comprises setting said desired cam timing to a nominal value if said humidity sensor has degraded.

17. (currently amended) An article of manufacture having a computer readable storage medium with a computer program encoded therein for adjusting engine operation of a vehicle having a humidity sensor, the engine having a cylinder with at least an adjustable valve, the article comprising:

code for determining a parameter indicative of ambient humidity outside of the vehicle based on said sensor;

code for determining a desired cylinder cam timing that varies based at least on said parameter and an engine operating condition; and

code for determining adjusting a control signal to adjust said cylinder valve based on said desired cylinder cam timing; and

code for determining degradation of said sensor based at least on a measured signal.

18. (new) A system for vehicle, comprising:

an internal combustion engine coupled to the vehicle having a cylinder, said cylinder having at lease an adjustable valve;

a humidity sensor coupled to the vehicle; and
a controller for, at least under some conditions, sending a first signal to said adjustable valve to operate said valve in a first condition during a first reading from said sensor and sending a second signal to said adjustable valve to operate said valve in a second condition with less dilution during a second reading from said sensor, where said second reading indicates a higher humidity than said first reading.

19. (new) The system of claim 18, wherein said adjustable valve is adjusted by a variable cam timing mechanism.